

APPLICANT(S): SHEPHERD, James et al.
SERIAL NO.: 10/817,436
FILED: April 5, 2004
Page 5

REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Status of Claims

Claims 1-12 are pending in this application and have been rejected.

35 U.S.C. § 102 Rejection

In the Office Action, the Examiner rejected claims 1-4 and 9 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,731,684 (Wu et al). Applicant traverses the Examiner's rejection of these claims.

As is well established, in order to successfully assert a prima facie case of anticipation, the Examiner must provide a single prior art document that includes every element and limitation of the claim or claims being rejected. Wu et al discloses method and apparatus for detecting scene changes and adjusting picture coding type in a HDTV encoder. The disclosure of Wu et al. provides an encoding architecture that enables I-frames, which start a new Group of Pictures (GOP), to be aligned with scene changes between successive fields.

A video encoder processing pipeline architecture is disclosed in Figure 2 of Wu et al. and the corresponding description. In the video encoder processing pipeline, a preliminary picture type determination is made by the pre-processing stage 205. However, the picture type finally determined for a particular field may be different from the preliminary picture type determination if a scene change is detected, as set out in the text at column 5, lines 7-16 of Wu et al. The scene change detection function 210 detects scene changes between consecutive fields at the pre-processing stage of the pipeline so as to change the location of the scheduled start of a new GOP to align with the start of a new scene if a scene change is detected at the proximity of the originally scheduled I-frame. Once a scene change is detected by scene change detection function 210, a control signal ScDet flag is sent to encoding stage 225 preventing generation of I frames for frames in the pipeline. Based on the results of the scene change detection, the

APPLICANT(S): SHEPHERD, James et al.
SERIAL NO.: 10/817,436
FILED: April 5, 2004
Page 6

encoders output FIFO level & number of frames coded so far in the GOP, the picture coding type decision function 235 makes a final decision for the picture coding type of the frame at the encoding stage 225 of the pipeline, as discussed in column 5 lines 32-38 of Wu et al. Once the scene change frame arrives at encoding stage 225, it is encoded as an I-frame.

However, there is no disclosure in Wu et al. of the step of "generating from said second field a synthetic field" where a cut occurs otherwise than at a frame boundary and "replacing said first field by said synthetic field" of claim 1. Instead, a preliminary decision as to whether a particular frame is to be encoded as an I-frame or a P-frame or a B-frame made by the pre-processing stage 205 of Wu et al. is either confirmed or modified by the picture coding type decision function 235, and a single encoding operation is carried out by the encoding stage 225. Thus, there is no disclosure or suggestion of the generation of a synthetic field from a second field and the substitution of a first field by said synthetic field. Claim 1 is, therefore, not anticipated by Wu et al., and neither are claims 2-4 based upon their dependency on claim 1.

Accordingly, Applicants respectfully request that the Examiner withdraw this rejection of claims 1-4 and 9.

35 U.S.C. § 103 Rejection

In the Office Action, the Examiner further rejected claims 5-8 and 10-12 under 35 U.S.C. § 103 as being unpatentable over Wu et al. in view of Holland et al. (U.S. Patent Application Publication No. 2003/0193614). Applicant traverses the Examiner's rejection of these claims.

Applicants submit that one of ordinary skill in the art would not combine Wu et al. with Holland et al. Wu et al. relates to the selection of an I-frame position dependant on a scene-change position in a video compression coder. By contrast, Holland et al. relates to methods and apparatus for correction of 2-3 field patterns and refers to the position of fields within a sequence of fields. There is no motivation for one of ordinary skill in the art to combine the teachings of these two documents.

Moreover, even if Wu et al. and Holland et al. were combined, the invention of claims 5-8 and 10-12 would not be rendered obvious. In particular, Wu et al. does not show the claimed feature of "means for identifying a video cut occurring otherwise than at a frame boundary", as

APPLICANT(S): SHEPHERD, James et al.
SERIAL NO.: 10/817,436
FILED: April 5, 2004
Page 7

recited in claim 5 and claim 9 upon which claims 10 and 11 are dependent. In the apparatus of Wu et al., no consideration is given to the frame structure of the interlaced fields. In fact, the arrangement in Wu et al. merely detects the frame at which scene change occurs in order to alter the position of an I-frame.

Holland et al. discloses methods and apparatus for correction of 2-3 field patterns and does not solve the deficiencies of Wu et al. with respect to claim 5 and claim 9 upon which claims 10 and 11 are dependent. In Holland et al., a disrupted video signal is analyzed to generate correction information, used to correct the disrupting video signal resulting in undisrupted video signal with continuous 2-3 field sequence. However, there is no disclosure in Holland et al. of the feature of automatic re-timing of the cut to occur at a frame boundary, as recited in claim 5 and claim 9 upon which claims 10 and 11 are dependent. Thus, claims 5-8 and 10-11 are not obvious based upon Wu et al. and Holland et al.

Claim, 12 requires the element "a field substitution element controlled through said field sequence detector and said video cut detector to substitute a synthetic field at a cut occurring otherwise than at a frame boundary, thereby to retime the cut to occur at a frame boundary in the output sequence". As discussed above, neither Wu et al. nor Holland et al. teaches or suggests the step of automatic re-timing of the cut to occur at a frame boundary, as recited in claim 5 and claim 9, and consequently neither teaches nor suggests this element of claim 12. Thus, claim 12 is not rendered obvious by the combination of Wu et al. and Holland et al.

Accordingly, Applicants respectfully request that the Examiner withdraw this rejection of claims 5-8 and 10-12.

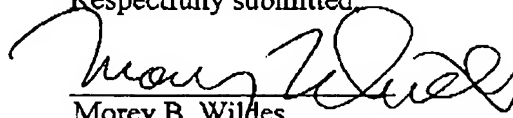
In view of the above comments, Applicants submit that the claimed invention is novel and inventive over the cited prior art documents.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

APPLICANT(S): SHEPHERD, James et al.
SERIAL NO.: 10/817,436
FILED: April 5, 2004
Page 8

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Respectfully submitted,



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